

I. Amendments

A. In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of the Claims

Please cancel claims 1- 4, 6, 9-11, and 20-23, and add new claims 24 through 36 as follows:

1-4. (cancelled)

5. (previously cancelled)

6. (cancelled)

7-8. (previously cancelled)

9-11. (cancelled)

12-19. (previously withdrawn)

20-23. (cancelled)

24. (new) A hermetically sealed integrated circuit package, comprising:

an integrated circuit comprising a substrate having an upper surface, a perimeter being disposed upon the upper surface and defining a hermetically sealed portion therewithin, at least one circuit element being disposed within the hermetically sealed portion;

a hermetic cap comprising a top member and a gasket, the cap being configured to cover the hermetically sealed portion and form a hermetically sealed cavity thereover, the gasket comprising opposing first inner and first outer vertical sidewalls depending downwardly from the cap, the sidewalls terminating in and being separated by a bottom edge;

a bonding agent disposed between and engaging the substrate and the bottom edge to form a hermetic seal between the cap and the substrate and thereby hermetically seal the cavity, the bonding agent further comprising opposing second inner and second outer sidewalls disposed between the substrate and the gasket, the second inner sidewall being located within the hermetically sealed portion, the second outer sidewall being located outside the hermetically sealed portion, and

a caulking agent disposed along and engaging at least portions of at least one of the second inner sidewall and the second outer sidewall, the caulking agent improving the hermeticity of the hermetic seal formed by the bonding agent.

25. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along substantially all of the second inner sidewall.
26. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along substantially all of the second outer sidewall.
27. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along substantially all of the second outer sidewall and the second inner sidewall.
28. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along at least portions of the first inner sidewall.
29. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along at least portions of the first outer sidewall.
30. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent is disposed along at least portions of the first inner sidewall and the first outer sidewall.
31. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent comprises multiple layers of caulking material.

32. (new) The hermetically sealed integrated circuit package of claim 24, wherein the bonding agent comprises gold.
33. (new) The hermetically sealed integrated circuit package of claim 24, wherein the caulking agent comprises at least one of an amorphous fluorocarbon polymer, a polyimide material, and a benzocyclobutene-based material.
34. (new) The hermetically sealed integrated circuit package of claim 24, wherein a thickness of the gasket between the first inner sidewall and the first outer sidewall ranges between about 1 micron and about 10 microns.
35. (new) The hermetically sealed integrated circuit package of claim 24, wherein the at least one circuit element comprises at least one of a resonator, a transistor and a connector.
36. (new) The hermetically sealed integrated circuit package of claim 24, wherein the substrate comprises silicon.